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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,684

04/25/2005

Jorg Mayer

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EXAMINER

BALLINGER, MICHAEL ROBERT

ART UNIT

PAPER NUMBER

3732

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,684	<b>Applicant(s)</b> MAYER ET AL.	
	<b>Examiner</b> MICHAEL R. BALLINGER	<b>Art Unit</b> 3732	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. In acknowledgement of the amendments filed 20 July 2009, claims 1-26 are currently pending.
2. Also, Applicant is reminded the listing of claims must include every claim previous present regardless of the claims current status. In the claims filed 20 July 2009, claims 27-45 which were previously cancel are not listed. Applicant is required to include every claim including those canceled in response to this or subsequent office actions. Failure to list each and every claim can result in non-compliant amendment notifications from the office. See 37 CFR 1.121 or 1.4.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-19 and 20-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Aeschlimann et al. (WO/02069817).
5. Per claim 1, figures 20-22 of Aeschlimann teaches a bone implant (i.e. implant 7) suitable for implantation in an implantation direction parallel to an implant axis in a cavity surrounded by a cavity wall of bone tissue (i.e. jawbone, 32), including implant portion including a first type of surface ranges (i.e. cylindrical piece, 44) of a material that is liquefiable by mechanical oscillation (page 18, lines 11-16 of translation) or a second type surface ranges (44) formed by pressing the liquefiable material out of a hollow space (i.e. porous sleeve material,

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page 18, line 14) and the implant portion includes cutting edges (i.e., C, D, and E, as illustrated below), the cutting edges are located outside the surface ranges (44), the cutting edges not extending in a common plane with the implant axis, face towards the distal end region of the implant and extend partly around the circumference of the implant (i.e., the cutting edges extend *partly* around the circumference of the implant, as evidenced by the cross-sectional view of figure 22) and the cutting edges are outer edges of step-shaped reductions in cross sectional area towards the distal end of the implant portion to be implanted (i.e., the cross sectional area along plane 1 as illustrated below is less than the cross sectional area along plane 2. Furthermore, the surface indicated S below has been interpreted by the Examiner as a step and thus meets the limitation of the claims.)

6. Per claims 2-4, Aeschlimann teaches the cutting edges have a wedge angle of less than 90 degrees (as illustrated below), are salient (i.e. cutting edges on the left side of figure 22 are jetting upward) and are under cut to form a chip space (as illustrated below).

7. Per claims 6 and 7, figure 8 of Aeschlimann teaches openings (i.e. the openings in sleeve, 13) leading into depressions (i.e. the openings are depressed into the sleeve) and the depressions are grooves extending axially (i.e. top to bottom of figure 8) in the implant region.

8. Per claim 8, figure 22 teaches osseointegrative surfaces are situated between the surface ranges of the liquefiable material (as illustrated below).

9. Per claims 10 and 13 figure 22 clearly indicates the cutting edges extending along parts of the circumference of the implant forming lower edges of scale like structure and the implant tapering towards a distal end.

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10. Per claim 12, figure 22 teaches the proximal end region includes a ring (i.e. top portion of cylindrical piece, 44) of thermoplastic material (i.e. polyester, page 12, lines 30-31 as the liquefiable material).

11. Per claim 14 and 15, figure 22 of Aeschlimann teaches the implant including steps with cutting edges, the steps having edges with wedge angles of 90 degrees or more (as illustrated below). Also, per claim 16, Aeschlimann teaches the implant has an essentially cylindrical form and cutting edges protruding from the implant and being distanced from the implant axis by distances which decrease in the direction of the implantation (i.e. cutting edge C is further from the implant axis than cutting edge E as illustrated below).

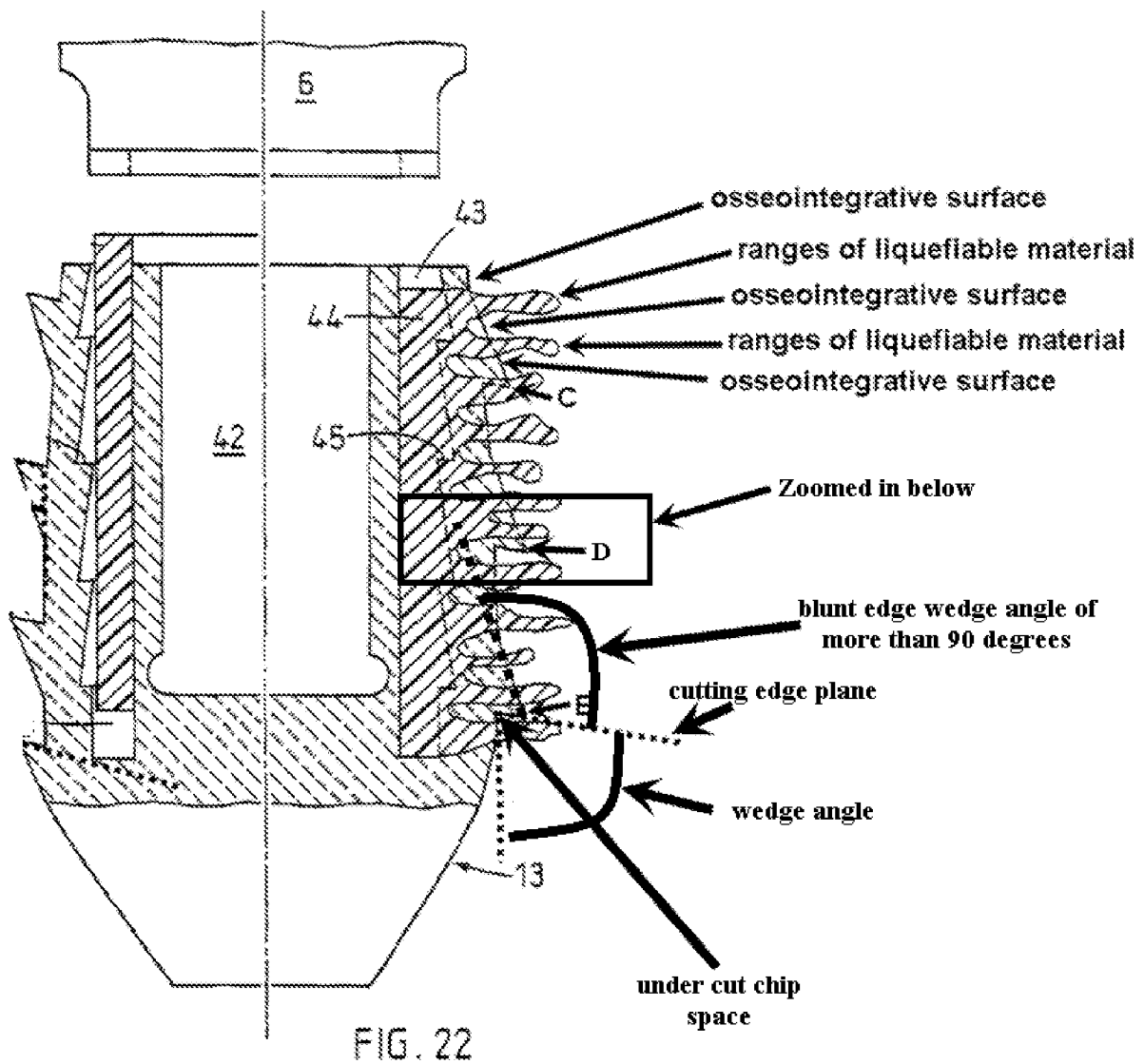
12. Per claim 17 figure 22 of Aeschlimann illustrates the cutting edges are aligned in series in the axial direction (i.e. cutting edges C-D-E as illustrated below). Furthermore, per claim 18, figure 22 teaches two series of cutting edges (i.e. C-D-E as illustrated below) facing each other, and surface ranges of liquefiable material are situated between the series on the implant structure (illustrated below).

13. Per claim 19, Aeschlimann teaches a hollow space (42: figure 22) and a piston (i.e. bottom cylindrical portion of artificial tooth, 42 shown in figure 20).

14. Per claims 21-23, figure 20 of Aeschlimann teaches the implant is a dental implant which carries an intermediate element (i.e. artificial tooth, 40) and the intermediate element is connected by a loose fit connection (page 17, lines 27-34).

15. Per claim 24, Aeschlimann teaches means for fastening an abutment, a crown, a bridge or a set of dentures (page 17, lines 29-30). Per claims 25 and 26, figure 27 of Aeschlimann teaches the implant is a shaft which is adapted to bridge a bone defect.

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***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aeschlimann et al. (WO/02069817 A1) in view of Lazarof (U.S. 6,142,782)

18. The Examiner notes the claim includes claim element “means for an insulating connection”, is a means plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. The written description discloses this "means" as "the piston is equipped with finely pitched thread 44, when pushed into the hollow space, 26 is cold-welded to the wall of the hollow space". Therefore, the Examiner has interpreted this limitation as threading which when compressed creates a cold welding between the piston and implant and equivalents. Aeschlimann

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et al. fails to explicitly disclose this limitation; however, Lazarof teaches a piston (i.e. draw screw, 80) including a threaded portion (i.e. threaded shank, 86) which when compressed into the implant (60) causes a cold welding connection (column 7, lines 42-60). Therefore, it would have been obvious to one having ordinary skill in the art at the time then invention was made to modify the piston-implant connection of Aeschlimann to include the threaded cold-welding connection of Lazarof, in order to prevent harmful bacteria from entering the internal hollow of the implant.

### ***Response to Arguments***

19. Applicant's arguments filed 20 July 2009 have been fully considered but they are not persuasive.

20. Beginning at the second full paragraph of page 9 of the remarks, Applicant has argued Aeschlimann fails to disclose cutting edges. The Examiner respectfully disagrees and notes, one having ordinary skill in the art would recognize the edges (labeled C, D, and E, as illustrated above) as shown in figure 22 to be sharp and capable of "cutting" given the terms broadest reasonable interpretation, especially since Aeschlimann discloses the sleeve as a metallic or ceramic sintered material (page 19, lines 3-4). Additionally, the claims as currently presented to not explicitly specify what the cutting edges are supposed to cut. Thus, it is the Examiner's position that the sharp metallic or ceramic edges (C, D, and E) would at least be capable of "cutting" soft tissue or other easily severed objects.

21. At the bottom of page 9 Applicant has argued, in light of the arguments mentioned above, that Aeschlimann "does not disclose, teach or suggest that cutting edges, in general are or need to be outside the surface range of material liquefiable by mechanical oscillation." First, the



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Examiner notes the claims also allow for surface ranges formed by pressing of the liquefiable material. In view of the above rejections and discussions, the Examiner maintains figure 22 does in fact teach cutting edges located outside of a surface range (as illustrated above).

22. On page 10 of the remarks, Applicant has made arguments concerning the pore size of the permeable sleeve in relation to the pressure required to push the liquefiable material through the pores. The Examiner notes, the arguments of counsel cannot take place of evidence in the record *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Additionally, the Examiner contends, the claims as currently does not specify the exact chemical make up of the liquefiable material, a maximum allowable pressure, or the size of the openings. Thus, Applicant's arguments are not commensurate with the scope of the claims (Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)). Furthermore, nothing in the disclosure of Aeschlimann suggests or requires the edges (C, D, and E) to include pores; therefore, the argument that it is impossible to fabricate cutting edges from porous material is not persuasive.

### ***Conclusion***

23. Finally, Applicant has presented arguments relating to the "step-shaped reductions" as claimed. As detailed in the rejection above, the Examiner maintains Aeschlimann does teach "step-shaped reductions" given the terms broadest reasonable interpretation.

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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25. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL R. BALLINGER whose telephone number is (571)270-5567. The examiner can normally be reached on Monday-Friday 7:30 A.M to 5:00 P.M. EST.

27. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571)272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

28. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Ballinger/  
Examiner, Art Unit 3732

/Cris L. Rodriguez/  
Supervisory Patent Examiner, Art Unit 3732